IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

1-26. (Canceled)

27. (New) A machine-implemented method for a storage system to transmit an IP packet over a Fibre Channel (FC) network, the method comprising:

accessing an FC name server database in response to a request for a connection over the FC network with a destination IP address;

discovering an FC network address corresponding to the destination IP address by searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields;

establishing the connection over the FC network using the discovered FC network address; and

transmitting the IP packet using the established connection over the FC network.

28. (New) A machine-implemented method as recited in claim 27, wherein the predefined priorities are determined based on the positions of the plurality of subfields.

29. (New) A machine-implemented method as recited in claim 27, wherein discovering the FC network address corresponding to the destination IP address comprises:

obtaining from an FC name server a plurality of values for a field in the FC name server database, wherein the field contains the plurality of subfields;

searching the plurality of values for the field based on the predefined priorities until finding a match with the destination IP; and

obtaining from the FC name server the FC network address corresponding to a value for the field, which has the match with the destination IP.

30. (New) A machine-implemented method as recited in claim 27, wherein the plurality of subfields are positioned in a symbolic node name field of the FC name server database.

31. (New) A machine-implemented method for a storage system to transmit an IP packet over a Fibre Channel (FC) network, the method comprising:

querying an FC name server for the FC network to retrieve a symbolic node name field from the FC name server database;

receiving from the FC name server a plurality of values for the symbolic node name field;

searching the plurality of values for the destination IP according to predefined priorities for a plurality of partitions in the symbolic node name field until finding a match with the destination IP;

obtaining from the FC name server the FC network address corresponding to a value for the symbolic node name field, which has the match with the destination IP;

establishing the connection over the FC network using the obtained FC network address; and

transmitting the IP packet using the established connection over the FC network.

32. (New) A machine-implemented method as recited in claim 31, wherein the symbolic node name field includes two partitions, and searching the plurality of values for the symbolic node name fields comprises:

searching values for a first partition of the two partitions for the destination IP address; and

searching values for a second partition of the two partitions if no match has been found with the destination IP in the first partition.

33. (New) A machine-implemented method as recited in claim 31, wherein obtaining from the FC name server the FC network address comprises querying the FC name server to retrieve the FC network address corresponding to a value for the symbolic node name field, which has the match with the destination IP.

34. (New) A storage system for transmitting an IP packet over a Fibre Channel (FC) network, the storage system comprising:

a processor;

a network adapter coupled to the processor to connect the storage system to the FC network; and

a memory coupled to the processor to store program code, which when executed by the processor, cause the processor to perform a method comprising:

accessing an FC name server database in response to a request for a connection over the FC network with a destination IP address;

discovering an FC network address corresponding to the destination IP address by searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields;

establishing the connection over the FC network using the discovered FC network address; and

transmitting the IP packet using the established connection over the FC network.

35. (New) A storage system as recited in claim 34, wherein the predefined priorities are determined based on the positions of the plurality of subfields.

36. (New) A storage system as recited in claim 34, wherein discovering the FC network address corresponding to the destination IP address comprises:

obtaining from an FC name server a plurality of values for a field in the FC name server database, wherein the field contains the plurality of subfields;

searching the plurality of values for the field based on the predefined priorities until finding a match with the destination IP; and

obtaining from the FC name server the FC network address corresponding to a value for the field, which has the match with the destination IP.

37. (New) A storage system as recited in claim 34, wherein the plurality of subfields are positioned in a symbolic node name field of the FC name server database.

38. (New) A storage system for transmitting an IP packet over a Fibre Channel (FC) network, the storage system comprising:

a processor;

a network adapter coupled to the processor to connect the storage system to the FC network; and

a memory coupled to the processor to store program code, which when executed by the processor, cause the processor to perform a method comprising:

querying an FC name server for the FC network to retrieve a symbolic node name field from the FC name server database;

receiving from the FC name server a plurality of values for the symbolic node name field;

searching the plurality of values for the destination IP according to predefined priorities for a plurality of subfields of the symbolic node name field until finding a match with the destination IP;

obtaining from the FC name server the FC network address corresponding to a value for the symbolic node name field, which has the match with the destination IP;

establishing the connection over the FC network using the obtained FC network address; and

transmitting the IP packet using the established connection over the FC network.

39. (New) A storage system as recited in claim 38, wherein the symbolic node name field includes two partitions, and searching the plurality of values for the symbolic node name fields comprises:

searching values for a first partition of the two partitions for the destination IP address; and

searching values for a second partition of the two partitions if no match has been found with the destination IP in the first partition.

40. (New) A storage system as recited in claim 38, wherein obtaining from the FC name server the FC network address comprises querying the FC name server to retrieve the FC network address corresponding to a value for the symbolic node name field, which has the match with the destination IP.

41. (New) A machine-readable medium to store program code, which when executed by a processor, cause the processor to perform a method for transmitting an IP packet over a Fibre Channel (FC) network, the method comprising:

accessing an FC name server database in response to a request for a connection over the FC network with a destination IP address;

discovering an FC network address corresponding to the destination IP address by searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields;

establishing the connection over the FC network using the discovered FC network address; and

transmitting the IP packet using the established connection over the FC network.

42. (New) A machine-readable medium as recited in claim 41, wherein the predefined priorities are determined based on the positions of the plurality of subfields.

43. (New) A machine-readable medium as recited in claim 41, wherein discovering the FC network address corresponding to the destination IP address comprises:

obtaining from an FC name server a plurality of values for a field in the FC name server database, wherein the field contains the plurality of subfields;

searching the plurality of values for the field based on the predefined priorities until finding a match with the destination IP; and

obtaining from the FC name server the FC network address corresponding to a

value for the field, which has the match with the destination IP.

44. (New) A machine-readable medium as recited in claim 41, wherein the plurality of

subfields are positioned in a symbolic node name field of the FC name server database.

45. (New) A machine-readable medium to store program code, which when executed by a

processor, cause the processor to perform a method for transmitting an IP packet over a

Fibre Channel (FC) network, the method comprising:

    querying an FC name server for the FC network to retrieve a symbolic node name

field from the FC name server database;

    receiving from the FC name server a plurality of values for the symbolic node name

field;

    searching the plurality of values for the destination IP according to predefined

priorities for a plurality of subfields of the symbolic node name field until finding a match

with the destination IP;

    obtaining from the FC name server the FC network address corresponding to a

value for the symbolic node name field, which has the match with the destination IP;

    establishing the connection over the FC network using the obtained FC network

address; and

    transmitting the IP packet using the established connection over the FC network.

46. (New) A machine-readable medium as recited in claim 45, wherein the symbolic node name field includes two partitions, and searching the plurality of values for the symbolic node name fields comprises:

searching values for a first partition of the two partitions for the destination IP address; and

searching values for a second partition of the two partitions if no match has been found with the destination IP in the first partition.

47. (New) A machine-readable medium as recited in claim 45, wherein obtaining from the FC name server the FC network address comprises querying the FC name server to retrieve the FC network address corresponding to a value for the symbolic node name field, which has the match with the destination IP.